SEM · MASS Spectrometry
HV Power Supply

KA-R Series

- Designed for SEM.MASS applications
- Ultra Low ripple noise and High stability
- Output polarity change by external signal

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KA-R series

KA-R series is an ultra low ripple, highly stable HV power supply. It is the perfect choice for SEM and MASS applications. The output polarity can be controlled with an external signal.

Features

- Designed for SEM.MASS applications
- High Stability 0.001 % / 5 min
- Ultra Low ripple noise and High stability
- Output polarity change by external signal
- Output voltage, current monitor

Lineup

<table>
<thead>
<tr>
<th>Output Voltage (kV)</th>
<th>Output Current (μA)</th>
<th>Output Power (W)</th>
<th>Model</th>
<th>Ripple (p-p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to ±10</td>
<td>1 mA</td>
<td>10</td>
<td>KA-10R1</td>
<td>30 mV</td>
</tr>
<tr>
<td>0 to ±20</td>
<td>400 μA</td>
<td>8</td>
<td>KA-20R0.4</td>
<td>70 mV</td>
</tr>
<tr>
<td>0 to ±30</td>
<td>250 μA</td>
<td>7.5</td>
<td>KA-30R0.25</td>
<td>100 mV</td>
</tr>
</tbody>
</table>

Specification

- Input Voltage / Current: +24 Vdc ±1 V / 1 A typ.
- Output Voltage Control: External control voltage 0 to 10 V(Vcon-in)
- Reverse Polarity: TTL(Reversing time ~90 % to +90 % 1.2 sec typ)
- Line regulation: ±0.001 % of F.S. for ±1 V input change
- Load regulation: ±0.001 % of F.S. for 100 μA to 100 % load change
- Stability: 0.001 % / 5 min, 0.005 % / Hr(After 3 Hr warm-up), 0.01 % / Hr (After 1/2 Hr warm-up)
- Temperature coef.: 25 ppm / °C
- Output monitor: Voltage : 0 to 10 Vdc
- Current : 0 to 10 Vdc
- Output terminal: HV shielded cable 1 m
- Protection: Overvoltage and short circuit protection
- Temperature Range: Operating : 0 °C to 50 °C
- Storage : −20 °C to 60 °C
- Accessory: Control connector

Options

- LTc10: Temperature coef. 10 ppm / °C
- LX: Control connector Molex 12-pin
- Base plate: 200W x 240L(mm) (20 kV, 30 kV)
- 200W x 155L(mm) (10 kV)

*When ordering, suffix the above option number to the model number.
<e.g.,>KA-10R1-LTc10X(Alphabetical order)
## D-sub Connector Assignment

### Standard

1. Ref. +10 V
2. Output voltage control 0 to 10 V
3. Internal potentiometer *
4. Internal potentiometer *
5. Output voltage monitor 0 to 10 V
6. Reverse polarity
   - TTL "Hi" is Negative
   - TTL "Lo" is Positive
7. COM
8. +24 Vdc input return

### LX Option

1. Output current monitor 0 to 10 V
2. +24 Vdc input
3. Output voltage monitor 0 to 10 V
4. Control link
5. Control link
6. Control link
7. Output voltage control 0 to 10 V
8. Reverse polarity
   - TTL "Hi" is Negative
   - TTL "Lo" is Positive
9. Signal com
10. Power 0-volt return
11. Polarity status
   - "Hi" is Positive, "Lo" is Negative
12. Polarity status
   - "Hi" is Negative, "Lo" is Positive

### Dimensions inch (mm)

#### 10 kV Model (Standard)

- Input side
- Output side

#### 10 kV Model (-LX Option)

- Input side
- Top
- Output side

#### 20 kV.30 kV Models (Standard)

- Input side
- Bottom
- Output side

#### 20 kV.30 kV Models (-LX Option)

- Input side
- Top
- Output side
Customer Inquiry Sheet (KA-R series)

Please copy this page and above fax number after filling out form below.

- I would like
  - [ ] A quotation
  - [ ] An explanation of product
  - [ ] A demonstration
  - [ ] To purchase
  - [ ] Other ( )

- Give us your requirement / comment

- Please fill in below.

  Address:

  Company:

  Dept.: Title:

  Name:

  Tel: Fax:

- Manufacturer warranty

  We warrant the specification, unless otherwise specified, at max. rated output after warm up, and scope of application is between 10% and 100% of max. rated output. We warrant that products contained in this catalog (hereinafter, the “Products”) are free from defects in material and workmanship under normal use for a period of one (1) year from the date of shipment thereof. However, the warranty period for X-ray detectors and X-ray source shall be either one (1) year from the date of shipment or 1,000 hours, whichever shorter. The above warranty shall not apply to any Product which, at our sole judgment, has been: i) Repaired or altered by persons unauthorized by us; or ii) Connected, installed, adjusted or used otherwise than in accordance with the instructions furnished by us (including being used in an inappropriate installation environment, such as in corrosive gas, high temperature and humidity). We are not liable for any loss, damage or failure of the Products after the shipment thereof caused by external factors such as disasters. We will not inspect, adjust or repair any of our power supply products in the field or at any customer site. If you suspect that there has been a power supply failure in the field, please inspect your whole unit by yourself in an effort to determine that the problem is, in fact, arising out of our power supply products. If it is found that the problem is arising out of such power supply product after inspection, please contact your local sales office for additional troubleshooting. A “Return Merchandise Authorization” is required in case the power supply must be sent back to the factory in Japan for inspection and repair. We, at our sole discretion repair or replace such defective products at no cost to the purchaser. We assume no liability to the purchaser or any third party for special, incidental, consequential, or other damages resulting from a breach of the foregoing warranty. This warranty excludes any and all other warranties not set forth herein, express or implied, including without limitation the implied warranties of merchantability or fitness for a particular purpose. The Products are not designed and produced for such applications as requiring extremely high reliability and safety, or involving human lives (such as nuclear power, aerospace, social infrastructure facility, medical equipment, etc.). The use under such environment is not covered by this warranty and may require additional design and manufacturing processes. No modification or supplement of this warranty shall be binding unless in writing and signed by a duly authorized officer of Matsusada. Matsusada reserves the right to make any changes in the contents of catalogs or specifications at any time without advance notice. Due to compelling reason such as unavailability of components used, products might be unavailable or unable to repair. The products specified in catalogs or specifications are designed for use by the person who has enough expertise or under the control of such person, and not for general consumers. Schematics of products shall not be submitted to users. Test result or test data for the products shall be available upon request with charge.

Make sure you read the specification in the latest catalog before you order. Contact nearby sales office for the latest catalog.

PLEASE SEE THE LINK BELOW FOR THE COMPLETE WARRANTY TERMS
http://www.matsusada.com/site/warranty.html